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A NEW SPECIES OF *ACHYROPAPPUS* (ASTERACEAE: BAHIEAE) FROM QUERÉTARO, MEXICO

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ABSTRACT

A novel species is removed from the fabric of *Achyropappus anthemoides* (H.B.K.) A. Gray and described as **Achyropappus queretarensis** B.L. Turner, **sp. nov.** With the new addition and recognition of the Guatemalan endemic, *A. depauperatus* (S.F. Blake) B.L. Turner, the genus now contains three species. A key to the species is provided, along with a photograph and line drawings of the novelty concerned; a map showing their distribution of the three species also is provided.

KEY WORDS: Asteraceae, Bahieae, *Achyropappus, Achyropappus anthemoides, Achyropappus depauperatus,* Mexico, Guatemala

Preparation of an upcoming treatment of the tribe Bahieae of Mexico in my ongoing Comps of Mexico (cf. Turner 2012) has occasioned the present paper. The novelty described here in *Achyropappus*, along with previously known taxa, now provides three names for the genus, as follows:

1. Ligules of ray florets white, 4–8 mm long; plants mostly 20–80 cm high ..... **Achyropappus anthemoides**
1. Ligules of ray florets yellow, 1–3 mm long; plants mostly 6–20 cm high.
    2. Involucral bracts ca. 3 mm long, widest near apex; pappus scales ca. 0.2 mm long; Guatemala ..... **Achyropappus depauperatus**
    2. Involucral bracts ca. 4 mm long, widest near middle; pappus scales 1–2 mm long; Mexico ..... **Achyropappus queretarensis**

ACHYROPAPPUS QUERETARENSIS B.L. Turner, **sp. nov.** Figure 1 **TYPE: MEXICO. Querétaro.** Mpio. de Colón: sobre el camino al Cerro Zamorano, matorral xerófilo, abundante in lugares perturbados, 2600 m, 30 Sep 2002, *J. Rzedowski 54056* (holotype: TEX)

Resembling *A. anthemoides* H.B.K. but a smaller, more delicate plant having smaller leaves (1–2 cm long vs 2–4 cm), ray florets yellow and 3 to a head (vs white and mostly 4–5 to a head), and stems and foliage sparsely glandular pubescent (vs densely so).

Annual herbs 5–18 cm high. **Mid-stems** much-branched below, sparsely pubescent with both glandular and/or eglandular hairs. **Leaves** (mid-stem) tripartite, mostly 1–2 cm long, the lowermost opposite, the upper alternate; petioles winged, 2–10 mm long, ciliate with spreading eglandular hairs. **Capitulescence** a terminal array of 1–5 heads forming a loose panicle 2–6 cm across, the ultimate peduncles 1–5 cm long. **Heads** ca 10 mm wide (rays excluded), 4–5 mm high; outer involucral bracts 5, ca 4 mm long, 3 mm wide, broadest near the middle, the margins scarious. **Receptacle** epaleate, plane, ca 1.2 mm across. **Ray florets** 3, pistillate, fertile; ligules yellow, 2–3 mm long. **Disc florets** yellow, 20–30 per head; corollas 5-lobed, ca 2 mm long, the throat ca 0.5 mm

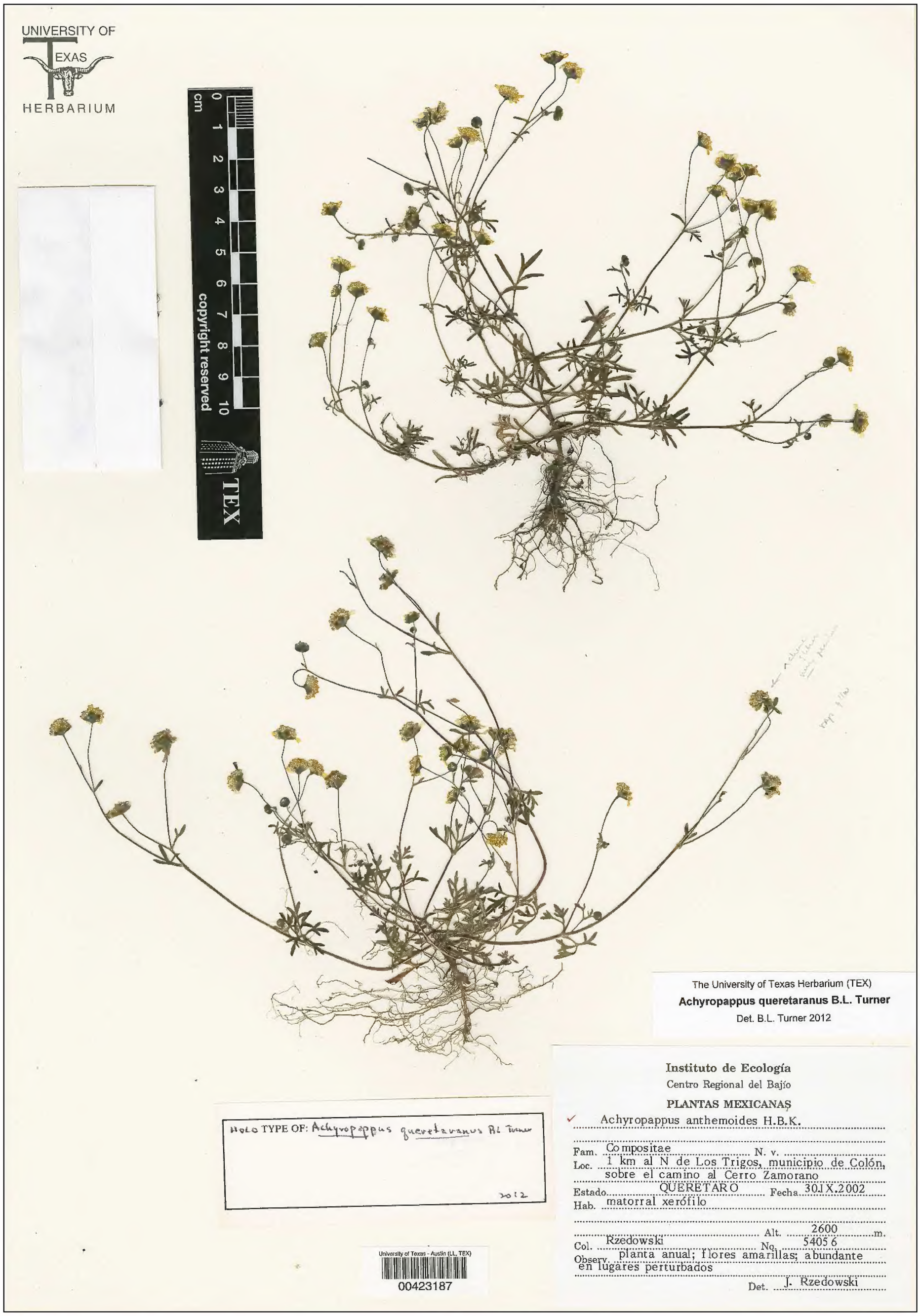

Figure 1. *Achyropappus queretarensis* (holotype, TEX).

long. **Achenes** black, smooth, 3–4-sided, 2–3 mm long, the outer series to some extent pubescent with villous hairs, the inner series mostly glabrous; pappus of ca 8 ribless scales, 1.0–2.0 mm long.

Additional specimens examined: **MEXICO. Guanajuato.** Mpio. De San Luis de la Paz: 9 km al NE de Chupaderos, sobre el camino a Mesas de Jesus, 2250 m, 8/11/92, *Rzedowski 51869* (TEX). **Hidalgo.** Mpio Zimapan: on felsitic ledges in open thorn scrub area at Puerto de la Estancia ca 53 km NW of Ixmiquilpan, ca 2000 m, 21 Oct 1974, *Cronquist 11267* (LL).

The species name derives from the state of Querétaro, whence the type.

When originally discerned I considered the idea of describing the novelty as but a variety of *A. anthemoides*, but their allopatric distribution and lack of intermediates swayed my thinking to that expressed here.

ACHYROPAPPUS ANTHEMOIDES H.B.K., Nov. Gen. & Sp. (folio ed.) 4: 203, pl. 390. 1820[1818]. *Schkuhria anthemoides* (Kunth) Wedd., Chlor. Andina 1: 74. 1855[1856]. *Bahia anthemoides* (H.B.K.) A. Gray, Proc. Amer. Acad. Arts 15: 40. 1879. **TYPE: MEXICO. Edo. Mexico.** "Crescit in agro frigido Tolucensi, prope pagum Islahuaca, alt. 1380 hex.," Sep, *Humboldt & Bonpland s.n.* (holotype: P).

The type of this species was described from near Toluca in considerable detail by H.B.K. and illustrated by a full page plate. A detailed description (including the present *Achyropappus queretaranus*) and full page illustration (presumably of *A. anthemoides*, sensu the present author) was provided by Villareal et al (2006). Chromosome number, $2n = 20$. Figure 2.

Hidalgo, Tlaxcala, and Edo. Mexico; oak-juniper woodlands, 2600–3000 m; Aug–Sep.

Achyropappus anthemoides reportedly grows at somewhat higher elevations than *A. queretaranus* (2600–3000 m vs. 2200–2600 m). The species superficially resembles *Villanova achillaeoides* (tribe Perityleae, sensu Panero 2007) but is readily distinguished by its larger rays and pappose achenes.

ACHYROPAPPUS DEPAUPERATUS (S.F. Blake) B.L. Turner, Phytologia 92: 349. 2010. *Bahia depauperata* S.F. Blake, Brittonia 2: 352. 1937. **TYPE: GUATEMALA. Dept. Huehuetenango**. Heavily grazed alpine pasture, S side of the Sierra Cuchumatanes, along trail between Huetenango and Soloma, 3200 m, 16 Sep 1934, *A. Skutch 1271* (holotype: GH!). Figure 2.

Known to me only by the type.

Blake, in his original, very detailed description, reckoned the present taxon to be better positioned in the genus *Bahia*, comparing it to *B. anthemoides* (= *Achyropappus anthemoides*) but Baldwin et al. (2002), using DNA data, retained both genera. Strangely, Nash and Williams (1976), in their account of Asteraceae for the Flora of Guatemala, failed to account for the taxon concerned.

In short, *Bahia depauperata* seems best positioned in the genus *Achyropappus*, along with its presumed closest relative, *A. anthemoides* (if not *A. depauperatus*), an affinity suggested by the characters given in the above key.

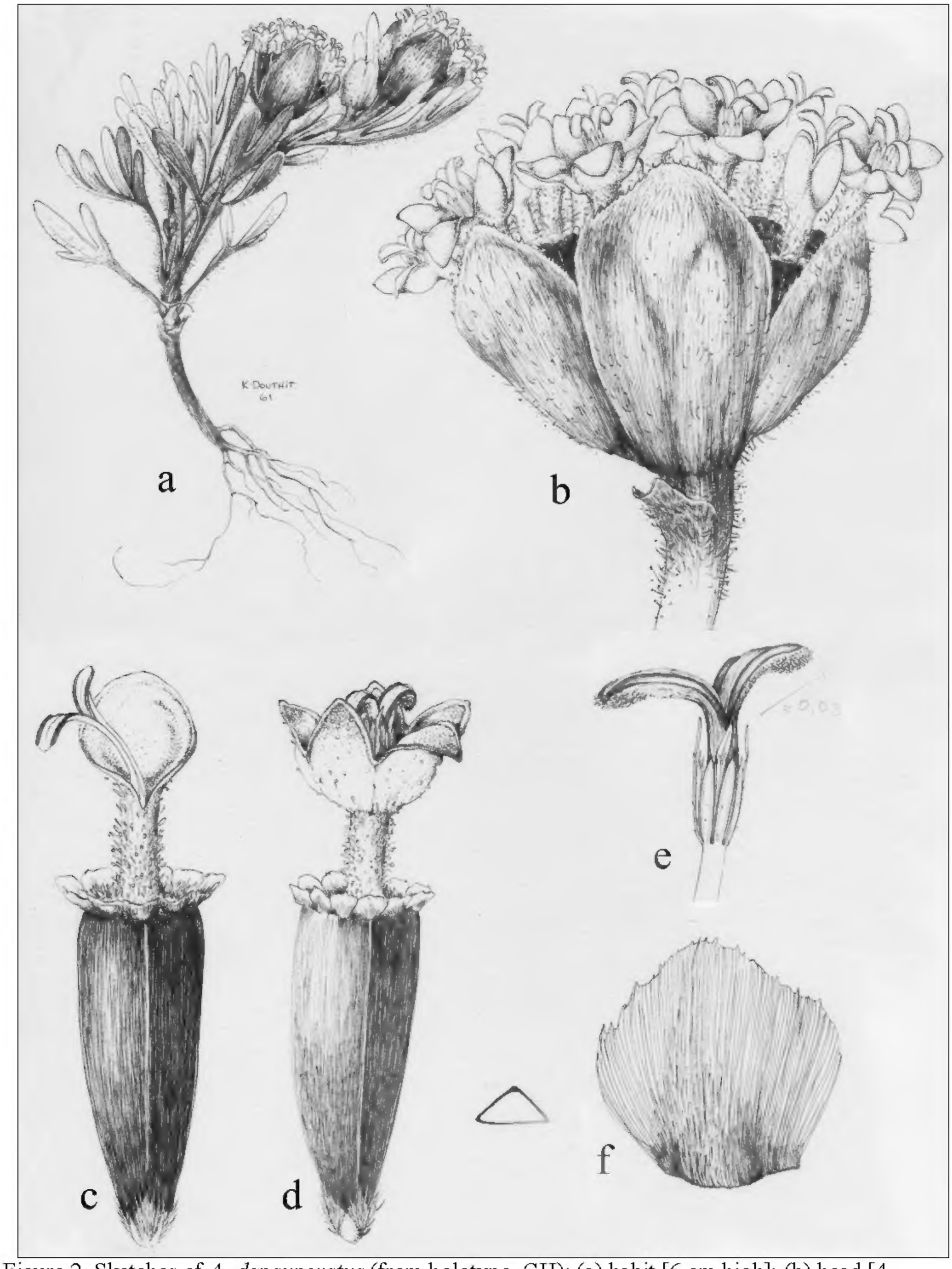

Figure 2. Sketches of *A. depauperatus* (from holotype, GH): (a) habit [6 cm high]; (b) head [4 mm high]; (c) ray floret [3.5 mm high]; (d) disc floret [3.5 mm high]; (e) stamens and style branches [0.03 mm long]; (f) pappus scale [0.02 mm long]. Produced by the well-known illustrator, K. Douthet of the University of Michigan, from NSF funds provided to the author many years ago now.

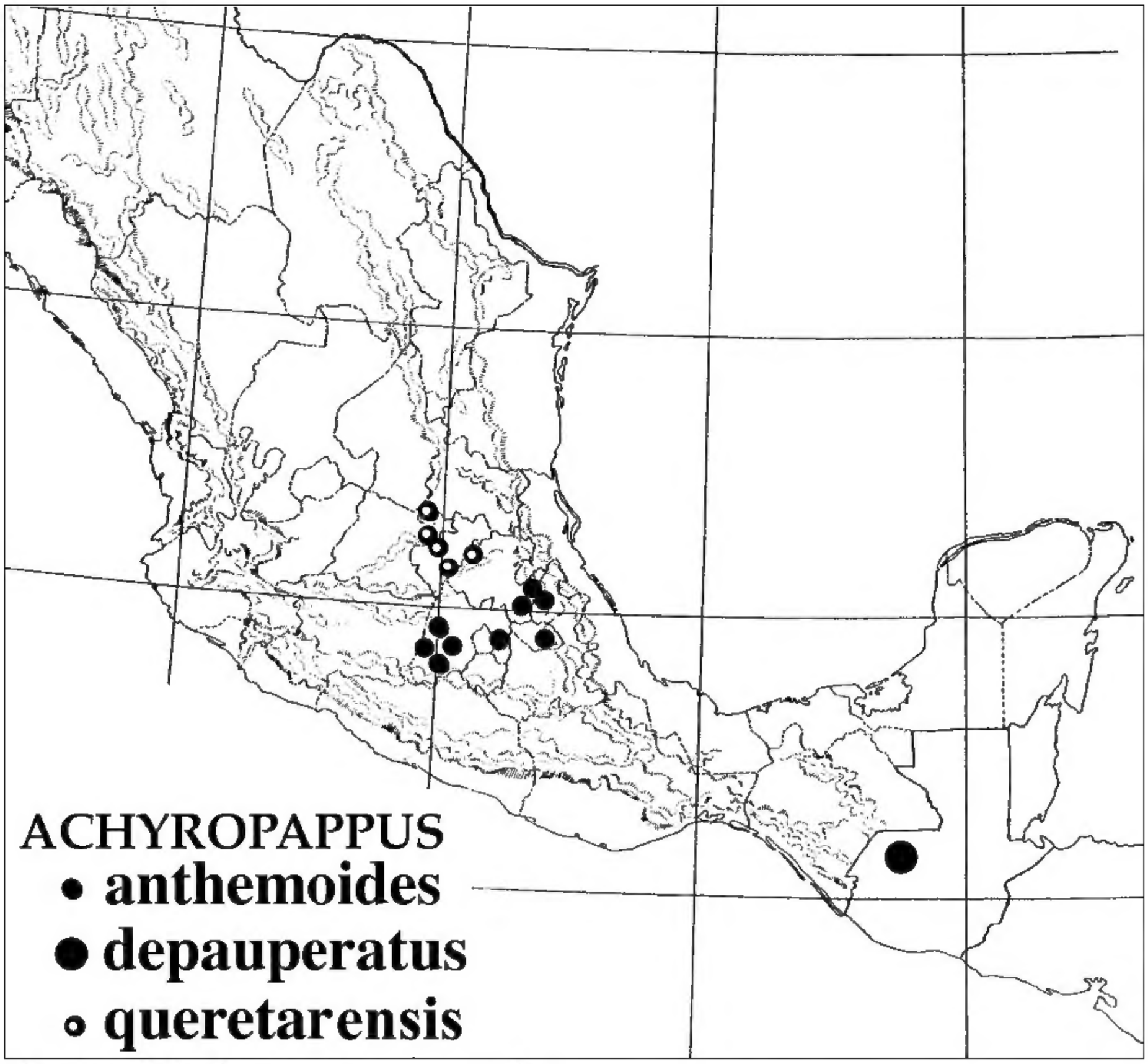

Figure 3. Distribution of *Achyropappus* species.

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